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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,773	12/01/2003	Jerome Chan Lee	57450-1161	3812

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EXAMINER	
CHUNG, DANIEL J	
ART UNIT	**PAPER NUMBER**
2677	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,773	LEE ET AL.	
	Examiner	Art Unit	
	Daniel J Chung	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12-20-04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

Receipt is acknowledged of Applicant's Information Disclosure Statement of 12-20-2004, which has been placed in the application file and considered by the Examiner.

Drawings

The drawings are approved by the Examiner.

Specification

Please review the application and correct all informalities.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,7,11,25 and 27-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1,7,11,25 and 27-33,

The phrase "optimum viewing point" it is not understood as to how one determines what is "optimum viewing point" should be? [it is noted that the functional

steps or method of deriving this "optimum viewing point" is missing in recited claim]

Thus, the claims are vague and ambiguous.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guedalia et al (5,963,213) in view of Fleury (2003/0043170).

Regarding claim 1, Guedalia et al discloses that the claimed feature of a method for controlling the scaling of a 3D computer model in a 3D display system, comprising: activating a zoom mode ["zooming"] (See Fig 6, col 1 line 46-47, col 12 line 28-29); selecting a model zoom point [i.e. "point"; 72] (See col 12 line 46-57); and setting a zoom scale factor [i.e. "zoom factor", "zoom level"] (See col 10 line 66-col 11 line 10, col 14 line 8-29); wherein the system, in response to the selected model zoom point and the set scale factor implements the zoom operation and automatically moves the model zoom point from its original position towards an optimum viewing point. (See Fig 6, col 3 line 7-19, col 3 line 35-48, col 12 line 46-57)

Guedalia et al does not specifically discloses that "an optimum viewing point." However, such limitation is shown in the teaching of Fleury. [i.e. 'restricting a point of interest within a view window during the processing of zooming'] (See [21-23],[26-30],[32],[38]) It would have been obvious to one skilled in the art to incorporate the teaching of Fleury into the teaching of Guedalia et al, in order to effectively provide better view of the user's interested portion of zoomed image, as such improvement is also advantageously desirable in the teaching of Guedalia et al for displaying the scaled image with optimized user's viewing position.

Regarding claim 2, Guedalia et al discloses that display system is stereoscopic. (See Fig 6)

Regarding claim 3, Guedalia et al discloses that method is implemented by a user via a mouse or other 2D position calculating computer input device. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 4, Guedalia et al discloses method is implemented by a user via a sensor which can move in three dimensions. (See Fig 6, col 1 line 46-47, col 12 line 46-48)

Regarding claim 5, Guedalia et al discloses that selection of the model zoom point is effected by signaling the system when a cursor or other indicator appears in front of the desired point on the displayed model. (See col 1 line 46-47, col 12 line 46-48, col 12 line 58-65)

Regarding claim 6, Guedalia et al discloses that selection of the model zoom point is effected by signaling the system when a tool moving in the 3D display has its tip at the desired point relative to the model. (See col 1 line 46-47, col 12 line 46-48, col 12 line 58-65)

Regarding claim 7, refer to the discussion for the claim 1 hereinabove, Fleury further discloses that the model zoom point is selected by the system as the nearest model point visible to the user along the z-axis of the display space, wherein the z-axis is set to run through an optimum viewing point. (See [27],[29],[32])

Regarding claim 8, refer to the discussion for the claim 1 hereinabove, Fleury further discloses that the model zoom point is selected by the system as a point in a crop box on the z-axis of the display space, wherein the z-axis is set so as to run through an optimum viewing point. (See [27],[29],[32])

Regarding claim 9, refer to the discussion for the claim 1 hereinabove, Fleury further discloses that model zoom point is one of the nearest such point to the user's

viewpoint, the farthest such point from the user's viewpoint, and the centroid of a collection of such points that are in the crop box and on the z-axis. (See [27],[29],[32])

Regarding claim 10, Guedalia et al discloses that the model zoom point is selected as a point in a crop box and in a magnification region. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 11, Guedalia et al discloses that the model zoom point is also a visible model point which is nearest to either an optimum viewing point or a user's viewpoint. (See col 1 line 46-47, col 12 line 46-48)

Regarding claims 12-14, Guedalia et al discloses that the magnification region is made visible to a user as an opening in a contextual structure, which contextual structure is a plane with a hole, wherein the hole's shape is substantially one of a circle, an oval, an ellipse, a square, a rectangle, a triangle, a trapezoid, or any regular polygon. (See Fig 6; Also See Fleury Fig 1-2, Fig 9)

Regarding claim 15, refer to the discussion for the claim 1 hereinabove, Fleury further discloses that a user causes the motion of the displayed model or models necessary to produce said visible model point that is inside the crop box and on said z-axis. (See [27],[29],[32])

Regarding claim 16, Guedalia et al discloses that the user causes said motion of the displayed model or models by at least one of grasping with a three-dimensional tool and dragging with a mouse. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 17, Guedalia et al discloses that the location of said model zoom point is indicated to a user by the display of a small structure centered thereon. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 18, Guedalia et al discloses that small structure is a small cross composed of lines and triangles, including or not including as a visible point the model zoom point. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 19, Guedalia et al discloses that the attention of the user is directed to the location of the model zoom point by a larger displayed contextual structure. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 20, Guedalia et al discloses that contextual structure is a plane with a hole surrounding the model zoom point. (See col 1 line 46-47, col 12 line 46-48)

Regarding claim 21, Guedalia et al discloses that plane is so rendered in a stereoscopic display as to appear to be translucently visible through other structures imaged in the display, regardless of whether said other structures are otherwise shown

as opaque or translucent. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 22, Guedalia et al discloses that the zoom operation can be set to be implemented stepwisely or smoothly, as controlled by the user. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 23, Guedalia et al discloses that each of the setting of the zoom scale factor and said stepwise or smooth implementation of the zoom operation can be controlled by one or more of the user's voice, a mouse, a 3D tool or other device, a slider, a wheel, and increment/decrement buttons. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 24, Guedalia et al discloses that the zoom operation and the motion of the model zoom point are implemented substantially simultaneously. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 25, Guedalia et al discloses that the correspondence between the degree of zoom and the motion of the model zoom point is linear, adjusted to display the unzoomed size with the model zoom point at its originally selected location and to display the maximum degree of zoom with the Model Zoom Point at the optimum viewing point. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 26, Guedalia et al discloses that the system automatically activates a clipping box in the display for values above a defined threshold of a system load estimate. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 27, Guedalia et al discloses that moving of the model zoom point towards the an optimum viewing point is immediate to said optimum viewing point. (See Fig 6, col 1 line 46-47, col 12 line 28-29, col 12 line 46-48)

Regarding claim 28, refer to the discussion for the claim 1 hereinabove, Guedalia et al discloses that the claimed feature of a method of resizing 3D computer generated models in a 3D display system, comprising: determining a position of a center of scaling point in response to user input (See col 12 line 46-57); determining a scaling factor to be applied to one or more 3D models in response to user input (See col 10 line 66-col 11 line 10, col 14 line 8-29); and simultaneously implementing the zoom operation and automatically moving the position of the center of scaling point from its original position a certain portion of a distance towards or away from an optimum viewing point depending upon said scaling factor. (See Fig 6, col 3 line 7-19, col 3 line 35-48, col 12 line 46-57)

Regarding claim 29, Guedalia et al discloses that simultaneously with implementation of the zoom the model zoom point is immediately moved to an optimum viewing point. (See Fig 6, col 3 line 7-19, col 3 line 35-48, col 12 line 46-57)

Regarding claims 30-31, claims 30-31 are similar in scope to the claims 28-29, and thus the rejections to claims 28-29 hereinabove are also applicable to claims 30-31.

Regarding claims 32-34, claims 32-34 are similar in scope to the claims 2,12 and 28-29, and thus the rejections to claims 2,12 and 28-29 hereinabove are also applicable to claims 32-34.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Chung whose telephone number is (571) 272-7657. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am- 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael, Razavi, can be reached at (571) 272-7664.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (Central fax)

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

djc
May 30, 2005

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600